

Patent Application of Robert Eric Heidel for "The Process of Using Hydraulic Turbines  
Attached to Water Mains, Water Towers, Sewage Lines..."

Claims

I claim:

1. A process for creating hydroelectric power that comprises:  
attaching hydraulic turbines to water mains, water towers, aqueducts, sewage lines, and pipes;  
capturing the kinetic energy of flowing water or sewage by said water or sewage striking the blades of the hydraulic turbines;  
changing the kinetic energy into electric energy by the turbine shaft turning a generator;  
attaching high voltage wires to the generator that can conduct the new electric energy to a conduction pipe;  
positioning the conduction pipe which insulates and transports the high voltage wires along the entirety of the water main, water tower, aqueduct, sewage line, or pipe;  
connecting the conduction pipe to the nearest power substation.
2. A process in Claim 1 wherein attaching the hydraulic turbine constitutes cutting a hole in said water main, water tower, aqueduct, sewage line, or pipeline.
3. A process in Claim 1 in which the hydraulic turbine is housed in a crescent shaped housing which will have a base that matches the perimeter of the hole cut into the main, tower, line, or pipe and the housing will be made of the same material as the medium or a more stronger and durable material able to withstand the pressure of the flowing fluid.
4. A process in Claim 1 in which the housing of the hydraulic turbine is attached to the line, main, or pipe and sealed so as no pressurized fluid may escape the main, tower, aqueduct, line, or pipe.
5. A process in Claim 3 wherein one side of the inside wall hydraulic turbine housing will have a hollow cylindrical protrusion where the turbine shaft will fit into the cylinder for support.
6. A process in Claim 3 wherein attached to the outside wall of the hydraulic cylinder housing opposite the side of the hollow cylindrical protrusion will be a box shaped structure that will house a generator.
7. A process in Claim 3 wherein on the inside wall opposite the hollow cylindrical protrusion a hole will be cut and a second grooved protrusion with a circumference equal

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to said hole will support the turbine shaft and allow the turbine shaft to enter the generator housing without any water leakage into the generator housing.

8. A process in claim 7 where in the part of the turbine shaft that passes through the second grooved protrusion will be grooved to fit into this protrusion.
9. A process in Claim 3 wherein the turbine will be positioned within the housing so as to let the turbine blades protrude into the center of the main, tower, line, aqueduct, or pipe where the fluid velocity is greatest and so the blades will be impinged upon by the flowing water or sewage enabling the turbine and turbine shaft to turn.
10. A process in Claim 6 wherein the second square shaped housing has a hole cut in the side facing the first hydraulic turbine housing and coinciding with the hole cut in the side of the first hydraulic turbine housing which will allow the turbine shaft to enter the second square shaped housing.
11. A process in Claim 6 wherein the generator will be positioned within the generator housing so that the turbine shaft will be connected to the generator.
12. A process in Claim 6 wherein two high voltage wires will conduct the new electricity from the generator to the conduction pipe and that a small tube attached to the roof of the generator housing will allow these wires to reach the conduction pipe.
13. A process in Claim 6 wherein an opening in the roof of the generator housing will allow the insulated high voltage wire to conduct the new electric energy to a conduction pipe.
14. A process wherein many hydraulic turbine housings and generator housings will be placed at intervals along the entirety of the water main, water tower, aqueduct, sewage line, or pipe in order to capture as much kinetic energy as possible.
15. A process wherein a conduction pipe that will insulate and transport the high voltage wires coming from the generator will follow and run for the entire length of the main, tower, aqueduct, line, or pipe in order to allow the many generators to conduct their energy to power substations.
16. A process in Claim 14 wherein openings will be all along the conduction pipe that connect to the tube on the roof of the generator housing so as to allow the insulated high voltage wires from the generators to connect to the conduction pipe and conduct their electricity into the conduction pipe.

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17. A process in Claim 14 wherein the conduction pipe will conduct all of the electricity to the nearest power substation in the geographical area of water main, water tower, aqueduct, sewage line, or pipe.

18. A process in Claim 14 wherein when the high voltage wires have to travel a long distance to a power substation and line loss would be great, storage systems will be installed at adjacent water pumping stations in order to keep line loss at a minimum.

19. A process in Claim 1 wherein by consumer’s demand and purchasing of utilities they will be making electricity by water and sewage flowing through water mains, water towers, sewage lines, aqueducts, and pipes that carry water or sewage to and from their homes and businesses and that the electricity created by their demand for utilities will be sold back to them.